

REMARKS

The Applicants have now had an opportunity to carefully consider the comments set forth in the Office Action that was mailed March 16, 2007. All of the rejections are respectfully traversed. Amendment, reexamination and reconsideration are respectfully requested.

The Office Action

In the Office Action that was mailed March 16, 2007:

claims 1-18 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite;

claims 1, 8 and 17 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,020,979 to Zeck, et al. ("Zeck"); and

claims 1-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zeck and further in view of U.S. Patent No. 6,243,499 to Loce, et al. ("Loce") and U.S. Patent No. 5,555,360 to Kumazaki, et al. ("Kumazaki").

The Present Application

By way of brief review, the present application is directed toward methods and systems for antialiasing image data that includes the selective application of logical filters and averaging filters. A logical filter is applied in regions where an unsaturated image object, such as unsaturated text or line art, adjoins a background portion of an image. An averaging filter is applied in other portions of the image.

Logical filters are filters wherein during their operation, some logical operation, such as, a comparison or ranking of values or a logical anding or oring is performed at least once in order to generate an output value. For example, as indicated in paragraph 34, order-statistic filters such as max, min and median filters, which, in the application described, use comparisons to rank a selected group of pixels and use that ranking to determine an output value, are examples of logical filters. Counting filters, which, for example, determine whether or not a threshold number of pixels within a group of selected pixels have pixel values above or below a threshold, or within a range of values, and generate an output value based on that determination, are also logical

filters. Logical filters may have inputs other than pixel values. For example, logical filters can make decisions and control operations based on tag information. For instance, if a target pixel is tagged as an edge pixel, part of an unsaturated image object or as an unsaturated edge pixel, a logical filter may adjust its processing accordingly.

In contrast, non-logical filters, such as, for example, averaging filters, process input data using arithmetic operations to generate their outputs without making decisions about the input data (with the possible exception of evaluating fault conditions, such as, conditions that might cause a divide-by-zero error, or negative value where a negative value is inappropriate).

Accordingly, the filter selection process identifies pixels associated with edges of unsaturated image objects for which application of logical filtering would provide a more visually pleasing rendered image than would application of, for example, the application of an averaging filter and selects the logical filter for application thereto. Another filter, such as an averaging filter, is selected for application to remaining portions of the image. In this way, the methods and systems of the present application provide a desired uniformity of pixel values in portions of an image where averaging filters would otherwise provide a less uniform and visually displeasing range of pixel values.

The Cited References

In contrast, the primary reference of the Office Action to Zeck is directed toward a method of encoding high resolution edge position information in continuous tone image information. Although Zeck mentions the use of an antialiasing filter, it is respectfully submitted that Zeck does not disclose or suggest selecting between different types of antialiasing filters as part of an antialiasing process. Moreover, Zeck does not disclose or suggest selecting between a logical filter and an averaging filter. For example, see FIG. 4A and FIG. 9, wherein antialiasing blocks 100 and 200 are depicted well ahead of selection blocks (unnumbered and 208). Additionally, wherein the present application is concerned with rendering unsaturated image objects such as unsaturated text, Zeck is concerned with rendering full intensity (i.e., saturated) text and line graphics (see column 1, lines 12-13), and instead of setting edge pixel values of image objects to substantially the same pixel value, Zeck suggests replacing some edge pixels (i.e., saturated pixels) with gray levels pixel having M different levels (e.g., column 2, lines

58-59). Additionally, Zeck teaches away from representing text with intermediate and, therefore, halftoned gray levels (column 1, lines 45-48). The selection function of Zeck is for combining antialiased image data with contone data (e.g., column 6, lines 6-16) and is not for selecting between antialiasing filter technologies.

The cited patent to Loce (also the first named inventor in the present application) is directed toward methods and apparatus for identification and tagging of antialiased pixels within regions of an image (title; abstract). The Office Action stipulates that Zeck does not disclose subject matter recited in **claims 2-7** and relies on Loce for disclosure of this subject matter. However, it is respectfully submitted that the indication that logic operations are employed to accomplish tagging found at the cited portion of column 7 of Loce does not disclose or suggest using an order statistic-based antialiasing filter as recited, for example, in the combination of **claims 1-4** of the present application. Additionally, it is respectfully submitted that the mentioning of a --lookup table-- in the context of combining tag information found near the beginning of column 7 and the occurrence of the phrase --pixel count-- toward the end of column 8 of Loce does not disclose or suggest the subject matter recited in the combination of **claims 1, 2, 3 and 5** of the present application. It is respectfully submitted that the discussion found at column 2, lines 37-40, of Loce, while indicating that an image can be at a resolution greater than a final or desired output resolution, does not disclose or suggest that a pixel resolution of a received image is at or above a value that is an integer multiple of the pixel resolution of the antialiased image. Additionally, it is respectfully submitted that the discussion of a method for tagging pixels at the portions of column 10 and 11, cited by the Office Action, does not disclose or suggest a method for using tags as a basis for selecting an antialiasing filter as recited in the combination of **claims 1, 2 and 7** of the present application.

Kumazaki is relied upon by the Office Action for disclosure of an operation of an antialiasing filter comprising setting gray values of edges of the image by inserting a page description language object into an output antialiased image. However, it is respectfully submitted that the discussion of a PDL controller carrying out an antialiasing of image information of the PDL language for each single page supplied from the host computer and generating an RGB color image made up of red (R), green (G) and blue (B) from the image information does not disclose or suggest setting the gray values of

edges of an image by inserting a page description language object into the output as recited in the combination of **claims 1, 8 and 9** of the present application.

The Claims are not Anticipated

Claims 1, 8 and 17 were rejected under 35 U.S.C. 102(b) as being anticipated by Zeck.

However, by way of explanation of the rejection with regard to **claim 1**, the Office Action asserts that Zeck discloses: upon detecting at least one region containing a background image level that adjoins an image object having pixel values in a range other than a predetermined range of limit values, setting the pixel values of edge pixels in the image object to be substantially the same value, and cites column 2, lines 58-67, in support of this assertion.

However, instead of disclosing setting pixel values of edge pixels in the image object to be substantially the same value, the cited portion of Zeck discusses applying an antialiasing filter to the text/line art regions, to replace some edge pixels with gray level pixels having M levels. Furthermore, at column 4, lines 61-65, Zeck explains that M, in an example 8-bit system, might be between about 4-16 levels. Accordingly, it is respectfully submitted that Zeck does not disclose or suggest setting pixel values of edge pixels in the image object to be substantially the same value.

Accordingly, **claim 1**, as originally submitted, is not anticipated by Zeck.

Additionally, **claim 1** has been amended and now recites *inter alia*: detecting that at least one of the one or more determined regions contains pixels having pixel values of a background image level that adjoined pixels of an unsaturated image object having unsaturated pixel values in a range other than a predetermined range of limit values, thereby identifying an edge of an unsaturated image object and setting pixel values of edge pixels of the edge of the unsaturated image object to obtain a desired uniformity of edge pixel values for the image object in the at least one detected region.

It is respectfully submitted that Zeck does not disclose or suggest determining a region has pixel values of a background image level that adjoin pixels of an unsaturated image object, thereby identifying an edge of an unsaturated image object. Indeed, Zeck indicates that it is undesirable to represent text and line art in halftones (which, it is submitted, would be required to render unsaturated text and line art image objects)

since halftoned edges tend to assume a ragged appearance (column 1, lines 46-48). Accordingly, it is respectfully submitted that Zeck does not anticipate or contemplate the methods and apparatus for antialiasing unsaturated image objects such as unsaturated text (e.g., FIG. 7, 720; FIG., 9, 920) of the present application.

Additionally, it is respectfully submitted that Zeck does not disclose or suggest setting pixel values of edge pixels of the edge of the unsaturated image object to obtain a desired uniformity of edge pixel values for the image object in the at least one detected region. As indicated above, Zeck does not address the issue of unsaturated image objects. Instead, Zeck addresses issues associated with full intensity text in line graphics (column 1, lines 12-14). To the extent that Zeck sets values associated with pixels at all, Zeck discloses replacing some edge pixels with gray level pixels having M levels (column 2, lines 58-59) and indicates that M might be between 4-16 levels (column 4, lines 63-64).

For at least the foregoing reasons, it is respectfully submitted that **claim 1**, as well as **claims 2-9**, which depend therefrom, is not anticipated by Zeck.

It is respectfully submitted that the amendments to **claim 1** are supported throughout the present application, including, for example, the Abstract (last lines) and, for example, paragraphs 7, 10, 32, 33, 37, 41 and 42.

Claim 8 depends from **claim 1** and is patentably distinct and not anticipated for at least that reason.

With regard to **claim 17**, the Office Action asserts that Zeck discloses *inter alia*: the antialiasing filter being operable to select at least one of a logical filter operation and an averaging filter operation; and apply the selected filter operation to the image object to produce the antialiased image, whereby the image object in the antialiased image exhibits edge pixel values that are substantially uniform around the image object. However, **claim 17** does not recite selecting at least one of a logical filter operation and averaging filter operation or applying a selected filter operation to an image object. Accordingly, it is respectfully submitted that the assertions of the Office Action with regard to **claim 17** are irrelevant.

Nevertheless, the assertions of the Office Action with regard to **claim 17** are respectfully traversed. Column 2, lines 52-57, do not disclose or suggest selecting at least one of a logical filter and an averaging filter operation according to pixel levels of

one or more pixels in an image object. Although the cited portion of column 2 mentions applying an antialiasing filter, the cited portion of column 2 does not disclose or suggest that the antialiasing filter that is applied is selected based on any particular selection criteria. Additionally, since Zeck suggests replacing some edge pixels with gray level pixels having M levels and indicates that M might be between about 4-16 levels (column 2, lines 68-69; column 4, lines 61-64). Accordingly, it is respectfully submitted that Zeck does not disclose or suggest edge pixel values are substantially uniform around the image object.

With regard to the recitation that is included in **claim 17**, arguments similar to those submitted in support of **claim 1** are submitted. Zeck does not disclose or suggest detecting a region containing a background image level that adjoins an image object having pixel values in a range other than a predetermined range of limit values. It is respectfully submitted that Zeck discusses methods for processing "high quality full intensity text and line graphics" (column 1, lines 12-14) and, therefore, does not address image objects having pixel values in a range other than a predetermined range of limit values as recited in **claim 17** as originally presented. Additionally, as indicated above, Zeck does not disclose or suggest an antialiasing filter being operable to set pixel values of edge pixels of the image to be substantially the same value, as was recited in original **claim 17**.

Additionally, **claim 17** has been amended to recite *inter alia*: the antialiasing filter being operable to: detect a region containing a background image level that adjoins an unsaturated image object having unsaturated pixel values in a range other than a predetermined range of limit values and to set the pixel values of edge pixels of the unsaturated image object to have a desired uniformity of pixel values. It is respectfully submitted that Zeck does not disclose or suggest detecting regions containing a background image level that adjoins an unsaturated image object having unsaturated pixel values in a range other than a predetermined range of limit values. Additionally, it is respectfully submitted that Zeck does not disclose or suggest setting pixel values of edge pixels of the image object to have a desired uniformity of pixel values. It is submitted that the discussion of replacing some edge pixels with gray level pixels having M levels cited by the Office Action is a reference to encoding high-resolution (BINRES) pixel position information (column 2, line 62) in a digital word that

would have otherwise included low resolution contone values. Accordingly, Zeck does not disclose or suggest setting --pixel values-- (as the term is traditionally used and used in the present application) to have a desired uniformity.

For at least the foregoing reasons, **claim 17** is not anticipated by Zeck.

The Claims are not Obvious

Claims 1-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zeck and further in view of Loce and Kumazaki.

With regard to **claims 1-9**, the Office Action asserts that Zeck discloses the limitations recited in **claim 1**. However, as indicated above, this assertion is respectfully traversed, both in regard to **claim 1** as originally filed and in its current amended form. In short, Zeck does not disclose or suggest detecting that at least one of the one or more determined regions contains pixels having pixel values of a background image level that adjoin pixels of an unsaturated image object having unsaturated pixel values in a range other than a predetermined range of limit values, thereby identifying an edge of an unsaturated image object and setting pixel values of edge pixels of the edge of the unsaturated image object to obtain a desired uniformity of edge pixels for the unsaturated image object in the at least one detected region.

Instead, as explained, for example, at column 5, lines 23-50, Zeck discloses reserving M values out of, for example, 2^N levels, for “edge rendition.” It is respectfully submitted that this cited portion of column 5 confuses the labeling of two groups of pixels referred to as Group I and Group II. In any event, Zeck divides the pixels of an image into two groups, one containing contone values and one which must be rendered at a relatively high resolution. For the high resolution group, the M values identifying an edge rendition pattern such as illustrated at FIGS. 6, 7 and 8 (column 5, lines 36-38) and do not refer to contone or gray values. Accordingly, it is respectfully submitted that Zeck does not include the subject matter for which it is relied upon by the Office Action.

For at least the foregoing reasons, **claim 1**, as well as **claims 2-9**, which depend therefrom, is not anticipated and is not obvious in light of Zeck, Loce and Kumazaki.

Additionally, the Office Action stipulates that Zeck does not disclose the subject matter of **claims 2-7** and asserts that Loce discloses the subject matter.

However, it is respectfully submitted that even if the earlier Loce patent includes

similar words or concepts to words or concepts included in the recitations of **claims 2-7** (which is disputed), it is respectfully submitted that the cited phrases are used in a context associated with tagging pixels and not in a context related to selecting antialiasing filters for processing or processes antialiasing image data. Instead, the earlier Loce patent is related to tagging images, or pixels thereof, that have already been antialiased (title).

Additionally, even if column 8, lines 11-12, of Loce, cited by the Office Action, indicate a histogrammer employs an observation window, it is respectfully submitted that disclosure of a histogrammer using an observation window does not disclose or suggest, even in combination with Zeck, that the operation of an antialiasing filter further comprises determining a region of the digital image by extracting an observation window of neighboring pixels at a target location, as recited in **claim 2** of the present application. It is respectfully submitted that the operation of a histogrammer does not disclose or suggest anything about the operation of an antialiasing filter.

For at least the foregoing additional reasons, **claim 2** is not anticipated and is not obvious in light of Zeck and the earlier patent by Loce.

Even if the earlier Loce patent uses the phrase --logic operation--, the use of the phrase --logic operation-- does not disclose or suggest, even in combination with Zeck, that an antialiasing filter operation comprises operation of an order statistic filter applied to super resolution pixels within an observation window, as recited in **claim 4** of the present application. Column 7, lines 37-39, of the earlier Loce patent, cited by the Office Action, simply indicates that although it will be appreciated that the logic operations employed to accomplish the tagging may be implemented in many equivalent forms (including serial/pipelined parallel), the embodiment depicted in FIG. 4 (of the earlier Loce patent) uses three channels. It is respectfully submitted that nothing in this cited portion of the earlier Loce patent discloses or suggests an antialiasing filter operation comprises operation of an order statistic filter.

For at least the foregoing additional reasons, **claim 4** is not anticipated and is not obvious in light of Zeck, Loce and Kumazaki.

Even if column 7, lines 10-14, of Loce make reference to a --lookup table--, and even if Loce makes use of the phrase --pixel count-- almost two columns later at column 8, lines 50-51, it is respectfully submitted that the use of these phrases does not

disclose or suggest that the operation of an antialiasing filter comprises the steps of forming an address based on counting similar values within the observation window and employing the address for indexing a table of values to determine the pixel values of edge pixels. It is respectfully submitted that the --lookup table-- discussed at the cited portion of column 7 of Loce is used in a combination operation for combining tags (column 7, lines 7-10) and is completely unrelated to the operation of an antialiasing filter. The use of the phrase --pixel count-- is related to the operation of a histogrammer (column 8, lines 46-52) and is completely unrelated to the use of the lookup table discussed at column 7, lines 10-14, of Loce and to the operation of the antialiasing filter as recited in **claim 5** of the present application.

For at least the foregoing additional reasons, **claim 5** is not anticipated and is not obvious in light of Zeck, Loce and Kumazaki.

Column 10, line 60 - column 11, line 15, of Loce, cited by the Office Action, indicates that having an “outline tag” allows edges to be treated with special screens for edges (high frequency) while treating the remainder of the gray field using a halftone that is suitable for larger areas (column 11, lines 8-12). It is respectfully submitted that the cited portion of columns 10 and 11 does not disclose or suggest receiving a tag identifying one or more pixels selected to be processed by an antialiasing filter. Accordingly, the combination of Zeck and Loce does not disclose or suggest the operation of an antialiasing filter further comprises receiving a tag identifying one or more pixels in the input image, the one or more identified pixels being selected for processing by the antialiasing filter as is recited in **claim 7** of the present application.

Additionally, it is respectfully submitted that any motivation to interpret the discussion in Loce of using tags to select halftone screens as suggesting the use of tags to select antialiasing filters or the selection of pixels to be processed by an antialiasing filter could only have been gleaned from information provided in the present application. Accordingly, the rejection of **claim 7** is based on impermissible hindsight reasoning.

For at least the foregoing additional reasons, **claim 7** is not anticipated and is not obvious in light of Zeck, Loce and Kumazaki.

Furthermore, it is submitted that the Office has not met its burden for presenting a *prima facie* case of obviousness. In order to present a *prima facie* case of

obviousness, the Office is required to identify some motivation for combining the references as suggested by the Office Action. However, in the present case, the alleged motivation: “for reduction or elimination of jaggies on the edges of lines and polygons, including text,” is achieved by Zeck on its own (e.g., see FIG. 2). Additionally, the cited portion of Loce (column 1, lines 47-48) is part of a sentence, which begins at line 44, which clearly indicates that the elimination of jaggies is a function of antialiasing techniques in general. There is no indication in the art that combining anything in Loce with anything in Zeck will improve the elimination of jaggies provided by Zeck. Furthermore, such combinations do not arrive at the subject matter recited in **claims 2-7** of the present application. Accordingly, there is no motivation for making the suggested combinations.

For at least the foregoing additional reasons, **claims 1-7** are not anticipated and are not obvious in light of Zeck, Loce and Kumazaki.

The Office Action stipulates that Zeck and Loce do not disclose the subject matter of **claim 9** and appears to rely on Kumazaki for this subject matter. However, the Office Action does not even assert that Kumazaki discloses that the operation of an antialiasing filter comprises setting the values of edge pixels by inserting a page description language object into the output antialiased image, as recited in original **claim 9**. Instead, the Office Action quotes a portion of Kumazaki and asserts that Kumazaki discloses the subject matter from Kumazaki. The cited portion of Kumazaki indicates that a PDL controller carries out antialiasing of image information of a PDL language for each single page supplied from a host computer and generates an RGB color image made up of red, green and blue from the image information. It is respectfully submitted that column 9, lines 47-51, of Kamuzaki, cited by the Office Action does not disclose or suggest the operation of an antialiasing filter comprises inserting a page description language object into an output antialiased image. Accordingly, **claim 9** as originally filed is not anticipated and is not obvious in light of Zeck, Loce and Kumazaki.

Additionally, **claim 9** has been amended and now recites the method of **claim 8**, wherein setting the pixel values of the edge pixels comprises fitting a page description language object into the image, the inserted page description language having predetermined pixel values, to establish a border on the unsaturated image object. It is

respectfully submitted that Zeck, Loce and Kumazaki do not disclose or suggest the subject matter of **claim 9**. Additionally, it is respectfully submitted that the amendments to **claim 9** are supported throughout the application including, for example, **claim 9**, as originally filed, as well as, for example, paragraph 33.

For at least the foregoing additional reasons, **claim 9** is not anticipated and is not obvious in light of Zeck, Loce and Kumazaki.

Claim 10 was rejected for the same reasons as **claim 1**. Accordingly, arguments similar to those submitted in support of **claim 1** are submitted in support of **claim 10**. Zeck, Loce and Kumazaki do not disclose or suggest an antialiasing filter operation includes selecting at least one of a logical filter operation and an averaging filter operation. Moreover, the cited references do not disclose or suggest that such a selection to a --logic operation-- is in regard to a tagging operation and is not fairly taken out of context and somehow combined with subject matter from Zeck. Moreover, even if such a combination were fairly suggested, it is respectfully submitted that logic operations associated with tagging do not disclose or suggest that antialiasing filter operations include selection of a logical filter operation.

For at least the foregoing additional reasons, **claim 10**, as originally filed, is not anticipated and is not obvious in light of Zeck, Loce and Kumazaki.

Additionally, **claim 10** has been amended and now recites *inter alia*: for each target pixel in the image, selecting one of a logical filter operation and an averaging filter operation, wherein the logical filter operation is selected for unsaturated pixels adjoining background portions of the image including pixel values that are within a predetermined range of limit values, and the averaging filter operation is selected for all other pixels and applying the selected filter operation for each target pixel in the image, thereby producing the antialiased image, wherein any unsaturated image object in the antialiased image exhibits pixels having a desired uniformity of pixel values. It is respectfully submitted that the amendments to **claim 10** are supported throughout the specification including, for example, FIGS. 7 and 9; paragraphs 35, 42, 45, 49 and original **claims 2 and 11**.

It is respectfully submitted that Zeck, Loce and Kumazaki do not disclose or suggest selecting a logical filter or an averaging filter wherein the logical filter is selected for unsaturated pixels adjoining background portions of the image including pixel values

that are within a predetermined range of limit values and the averaging filter operation is selected for all other pixels. Instead, Kumazaki suggests that antialiasing includes generating an RGB color image made up of red, green and blue (column 9, lines 50-51). Accordingly, there is no motivation to combine subject matter from Kumazaki with subject matter from Zeck and Loce.

It is respectfully submitted that Zeck, Loce and Kumazaki do not disclose or suggest selecting one of a logical filter operation and an averaging filter operation for each target pixel in an image as part of an antialiasing filter operation as is now recited in **claim 10**.

For at least the foregoing reasons, **claim 10**, as well as **claims 11-16**, which depend therefrom, is not anticipated and is not obvious in light of Zeck, Loce and Kumazaki.

Claims 11-16 were rejected for the same reasons as **claims 2-8** and **10**. Accordingly, arguments similar to those submitted in support of **claims 2-8** and **10** are submitted in support of **claims 11-16**.

Claim 17 was rejected for the same reasons as **claim 1**. Accordingly, arguments similar to those submitted in support of **claim 1**, as well as arguments submitted earlier in support of **claim 17** above, are submitted in support of **claim 17**. Zeck, Loce and Kumazaki do not disclose or suggest an antialiasing filter being operable to detect a region containing a background image level that adjoins an unsaturated image object having unsaturated pixel values in a range other than a predetermined range of limit values and setting the pixel values of edge pixels of the unsaturated image object to have a desired uniformity of pixel values.

Claim 18 was rejected for the same reasons as those provided with regard to **claim 10**. Additionally, **claim 18** has been amended in a manner similar to the manner in which **claim 10** has been amended. Accordingly, arguments similar to those submitted in support of **claim 10** are submitted in support of **claim 18**.

For at least the foregoing additional reasons, **claims 2-18** are not anticipated and are not obvious in light of Zeck, Loce and Kumazaki.

The Claims are Definite

Claims 1-18 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for including or for depending from claims that include the term “substantially” or the phrase “setting the pixel values of edge pixels in the image object to be substantially the same value.” In this regard, the Office Action asserts that the term “substantially” is not defined by the claim and that one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. While this assertion is respectfully traversed, **claims 1, 10, 17 and 18** have been amended and no longer include the term “substantially.” Instead, the claims recite --edge pixel values having a desired uniformity of pixel values--. It is respectfully submitted that support for these amendments is found throughout the specification including, for example, the Abstract (last line) and, for example, paragraph 10.

With regard to the assertion that it is unclear which values are being compared with regard to the recitation “setting the pixel values of edge pixels in the image object to be substantially the same value,” the assertion is respectfully traversed. It is respectfully submitted that the recitation is clear in its meaning that the edge pixels are set to be substantially the same value as each other. Accordingly, it is respectfully submitted that recitations such as “edge pixel values having a desired uniformity of pixel values” is also a clear indication that the values of edge pixels are uniform with respect to each other within a desired tolerance.

For at least the foregoing reasons, it is respectfully submitted that **claims 1-18** are definite and withdrawal of the rejections under 35 U.S.C. 112, second paragraph, is respectfully requested.

Telephone Interview

In the interests of advancing this application to issue the Applicant(s) respectfully request that the Examiner telephone the undersigned to discuss the foregoing or any suggestions that the Examiner may have to place the case in condition for allowance.

CONCLUSION

Claims 1-18 remain in the application. **Claims 1, 5, 7, 9, 10, 14, 15, 17 and 18** have been amended. The amendments should not require a new search. For at least the foregoing reasons, the application is in condition for allowance. Accordingly, an early indication thereof is respectfully requested.

Respectfully submitted,

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